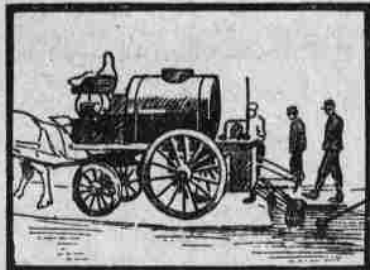


# ROAD AND FARM IMPROVEMENT

## ROAD TARRING.

Process Which is Proving Highly Successful in France.

On the continent the oiling or tarring of roads is making considerable progress, writes the Paris correspondent of the Scientific American. The methods which seem to be most successful in the first case we find products such as Weatrumite, Pulvanto, and the like in which the liquid tar obtained from mineral or vegetable oils is formed into an emulsion or a solution in water and thus sprinkled upon the road. The solution in water can be obtained by adding alkali such as ammonia, or by the use of casein or other products. The liquid which is thus obtained can be applied to the road from an ordinary sprinkling cart. Another way of applying it is to pipe the water from the mains through a hose and use a special form of nozzle into which the oil or tar is fed from a reservoir. For use in cities this is quite practical. M. Forestier has designed a good form of mixing nozzle which consists of two conical pieces fitting into each other in such a way that the water stream acts by aspiration to draw in the oil and mix it with the water in the nozzle. The distance



Tarring Wagon at Work.

between the two cones can be adjusted to suit the conditions of the case. From the side of the nozzle a rubber hose leads to the oil tank, which can be well carried on the back of the man who is doing the sprinkling. For a larger supply the hose is placed directly into the oil barrel, and the latter is run along on a cart by a second man. To avoid the use of a valve in the supply pipe to regulate the flow, the nozzle carries a small air valve which can be permanently adjusted for a given supply.

Much more efficient than the method of sprinkling is the application of a layer of hot tar compound upon the road, which has been thoroughly swept so as to leave the surface quite clean. In this way the road absorbs the hot tar and this forms a very solid coating, as the tar sinks for a considerable depth below the surface. According to the report which was made recently by Chief Engineer Heude, the hot tarring method is to be considered one of the best to be used upon roads on a large scale. In 1905 he treated some 150,000 square yards of roadway in France and finds that the results are excellent and quite justify the expense which is occasioned. The dust which usually results from the wear of the road had disappeared, and at the same time the annual expense of keeping up the road diminished so as to more than compensate for the cost of the process. This comes from the great reduction of expenses for watering the road, sweeping and mud-scrapping as well as from the greater durability of the roadbed, so that not only does the tarring process cost nothing, but it gives an annual economy of \$0.01 per square yard yearly. One coating of tar lasts about a year.

To carry out this method practically, the treatment should be made during warm and dry weather and at certain hours of the day. To avoid an unexpected rainfall it is necessary that the operation should be done quickly. With the primitive apparatus which was used at first, requiring a great deal of hand labor, it was hardly possible with gangs of a dozen men to tar more than 1,000 square yards of road per day, applying the tar by means of hand brushes. This led to the use of an automatic system which could be used for applying on a large scale and in a continuous manner, so that it is now possible to treat more than 2,000 square yards per hour. We also avoid heating the tar over a fire, which is always dangerous, and the steam heating system is employed here. The apparatus of the Lasaally system is illustrated here. It consists of a tar-heating car and a spreading car. The tar which is used here is the semi-liquid product which comes from the gas works.

The tar-heating car is composed of three main parts. In front is placed the boiler, which furnishes the steam for the heating.

**Walnut Forests Not Common.**  
The walnut is nowhere a gregarious tree, but usually occurs in scattered groups or as isolated individuals among the associated species. Within the limits of its range there are regions where it is almost unknown, while within a few miles it may be common, although conditions in both regions seem identical. In the river valleys of Ohio, Indiana, Illinois and Kentucky it is found associated with the maples, hickories, oaks, basswood, cherry and other hardwoods of the region, although not always intermingling closely with them. West of the Mississippi the walnut is confined to river valleys and moist situations. In this western region it is found associated with the coffee tree, green ash, hackberry, basswood and white elm.

## Like to Be Free.

There is one question we wish our folks would answer for us. If you have an unfenced lot around the buildings, and the pigs have the run of it, they will grow as fast as the weeds and grass they are eating. Fence this in, then turn the same pigs in, and the growth is checked. You will soon notice those pigs are not doing as well. Is it the sense of freedom that makes the difference?

## A CONCRETE WALK.

Directions for Laying Which Will Aid Farmer in Doing Work Himself.

This is the time of the year when many walks are being laid, and it is now well known that the cement walk is the best of all. If properly put down it will last a lifetime; it is smoother and looks better than any other walk, and it requires little or no attention to keep it clean. Considering these advantages, it is certainly the cheapest walk as well, and this is doubly true when it is laid by the land owner and his ordinary hired help, thus saving the expenses of an expert. The following exact directions for laying such a walk are given by Mr. Fred R. Crane, head of the farm mechanics department of the University of Illinois:

If your subsoil is very porous, allowing the water to fall away rapidly, so there is no chance for heaving of the soil during freezing weather, then there is little need for excavation of the earth if the foundation is solid, and there is no organic matter to decay and let the walk settle.

Where the subsoil is a stiff clay the writer has followed the practice of excavating 14 to 16 inches deep, and filling with cinders to within 4½ inches of the top of the completed walk, tamping down the cinders to make a firm foundation. Gravel will do if cinders are not available. Two by 4's are used for the sides of the form and great care is taken to level them.

A crown is formed by raising the middle of the walk one-fourth inch for every foot in width. The medium mixture (one part Portland cement, two and one-half parts coarse sand, five parts crushed rock) is used, mixing it thoroughly and wetting it so it will pack well. It is then shoveled into the forms and pounded down, leaving the top one-half inch below the top of the forms. The 2 by 4's at the sides are now marked every four feet, and the walk cut through the concrete to the cinders to allow for expansion and contraction in warm and cold weather.

The surface coating is composed of one part cement and two and one-half parts of sand, leaving out the crushed rock. This layer is mixed to the consistency of mortar and spread over the concrete in the forms. The surface is struck off by a gage which gives the proper amount of crown. After setting for a few minutes it is rubbed smooth with a trowel. Too much rubbing will separate the cement and sand particles and leave an unsatisfactory appearance.

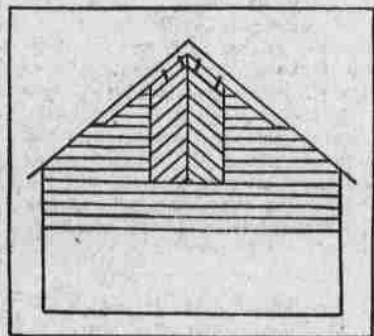
This surface layer must also be cut at the same points as the concrete layer below. Cover the walk to protect it from the sun, if it is sprinkled with water from time to time, that will insure an even setting of the materials.

In about three days it will do to bear weight, but it will not get its ultimate strength short of 30 days.

## DOORS FOR GABLE END.

So Hang as to Swing Entirely Away from the Opening.

There is always more or less trouble in finding a suitable method of hanging doors for unloading hay from the



Plan of Door.

outside of buildings with slings. In the accompanying plan each door is hung on a track parallel to the roof. The doors, of course, are a little difficult to close, but no more so than a door hinged at the bottom in which there is often danger in handling.

## BETTER SEED, BETTER CROP.

Some of the Factors Affecting the Wheat Yield.

The results of 12 separate tests made at the Ontario college shows an average increase in yield of grain per acre of 6.8 bushels from large as compared with small seed, of 7.8 bushels from plump as compared with shrunk seed, and of 35.6 bushels from sound as compared with broken seed. Seed which was allowed to become very ripe before it was cut produced a greater yield of both grain and straw and a heavier weight of grain per measured bushel than that produced from wheat which was cut at any one of four earlier stages of maturity. In 1897 and again in 1902 a large amount of the winter wheat in Ontario became sprouted before it was harvested, owing to the wet weather. Carefully conducted tests showed that an average of only 76 per cent. of the slightly sprouted and 18 per cent. of the badly sprouted seed would grow and produce plants. Surely he is the wise farmer who will sow none but large, plump, sound, ripe seed of good vitality.

## POULTRY NOTES.

Do not have the roosts high. The hens do not need them and the heavy birds are injured by having to fly down from them onto a hard floor. The cost of keeping a hen on the farm is less than 50 cents a year. An average hen will lay ten dozen eggs a year. Good layers will lay many more. The tendency of wheat is to produce a healthy growth, feed the muscular tissues and aid materially in causing the hen to lay many and rich eggs. There is a much better profit to be made in winter than in summer from the hens, but it needs good care and understanding of their wants to accomplish it. There is a better health among the spring fowls because they get the food which is good for digestion and get necessary grit to help the gizzard to do its work.

## LEFT IT TO THE OLD HENS.

Amateur Fancier Thought His Responsibility Had Ended.

An Indiana man tells of the efforts of an author belonging to the Hoosier school of historical novelists to put in his leisure time as a "hen farmer" in that state. The literary person's venture afforded his agricultural neighbors no end of amusement.

During the first year the amateur farmer discovered that all his little chickens, which were confined in coops, were languishing at the point of death. The novelist went over his "hen literature" to locate the cause of the trouble, but to no avail.

Finally he called upon an old chap named Rawlins, to whom he put the question:

"What do you suppose is the matter with those chickens?"

"Well, I dunno," said Rawlins.

"What do you feed 'em?"

"Feed them!" exclaimed the novelist-farmer. "Why, I don't feed them anything!"

"Then, how'd you suppose they was a-goin' to live?"

"I presumed," replied the literary person, "that the old hens had milk enough for them now."—Lippincott's Magazine.

## BABY TORTURED BY ITCHING.

Rash Covered Face and Feet—Would Cry Until Tired Out—Speedy Cure by Cuticura.

"My baby was about nine months old when she had rash on her face and feet. Her feet seemed to irritate her most, especially nights. They would cause her to be broken in her rest, and sometimes she would cry until she was tired out. I had heard of so many cures by the Cuticura Remedies that I thought I would give them a trial. The improvement was noticeable in a few hours, and before I had used one box of the Cuticura Ointment her feet were well and have never troubled her since. I also used it to remove what is known as 'cradle cap' from her head, and it worked like a charm, as it cleansed and healed the scalp at the same time. Mrs. Hattie Currier, Thomaston, Me., June 9, 1906."

**The Three Milkmen.**  
A man in a small western town bought a quart of milk and on arriving home found it was adulterated with water. The next day he posted bills in different sections of the town reading:

"I bought a quart of milk yesterday which I found to be adulterated. If the scoundrel will bring me another quart I'll denounce him."

The next day he found three quart cans on his doorstep. There were three dairymen in the town.—Judge's Library.

## Cunning Chap.

"Yes," confessed the blushing girl with the white parasol. "I thought it rather odd that Jack should keep on asking about our college yell. Finally, to get rid of him, I told him it was three yells in quick succession."

"What then?" asked her chum.

"What then? Why, the goose kissed me three times before I could remonstrate and when I gave a yell for each kiss mamma thought I was giving the class yell."

## Fresh Fuel.

The scrap between the married couple had died down to a few listless mutterings, and the canary bird in the cage was beginning to think about singing again, when she remarked, as a sort of afterthought:

"At any rate, everybody in my family thinks I am very intelligent."

"Yes, by the side of them you are," he replied with a bitter snort.

After this the scrap was renewed jubilantly.

## A Country Marvel.

The little fresh air boy was comfortably quartered in a farm house near the salt-water for his summer's outing. The first day he strolled down the road to the marshes and he stared in astonishment at the cattails growing there. Then turning around to a native of the place who was accompanying him he said: "Gosh; I didn't know that sausages grow on sticks."

## Large Sum for Pasteur Institute.

Daniel Osiris, the Jewish banker and philanthropist, of Paris, who recently died, left a will in which he disposed of \$13,000,000, giving \$5,000,000 to the Pasteur Institute.

Only love can keep out bitterness; love is stronger than the world's unkindness.—George Eliot.

## WHAT'S THE USE?

To Pour in Coffee When It Acts as a Vicious Enemy.

Fasters have gone without food for many days at a time but no one can go without sleep. For a long time I have not been sleeping well, often lying awake for two or three hours during the night but now I sleep sound every night and wake up refreshed and vigorous," says a Calif. woman.

"Do you know why? It's because I used to drink coffee but I finally cut it out and began using Postum. Twice since then I have drunk coffee and both times I passed a sleepless night, and so I am doubly convinced coffee caused the trouble and Postum removed it."

"My brother was in the habit of drinking coffee three times a day. He was troubled with sour stomach and I would often notice him getting down from the can to relieve the distress in his stomach; lately hardly a day passed without a dose of soda for relief."

"Finally he tried a cup of Postum and liked it so well he gave up coffee and since then has been drinking Postum in its place and says he has not once been troubled with sour stomach."

Even after this lady's experience with coffee her brother did not suspect for a time that coffee was causing his sour stomach, but easily proved it. Coffee is not suspected in thousands of cases just like this but it's easily proved. A ten day's trial works wonders. "There's a Reason."

Read the famous little book, "The

## Architects and Closets.

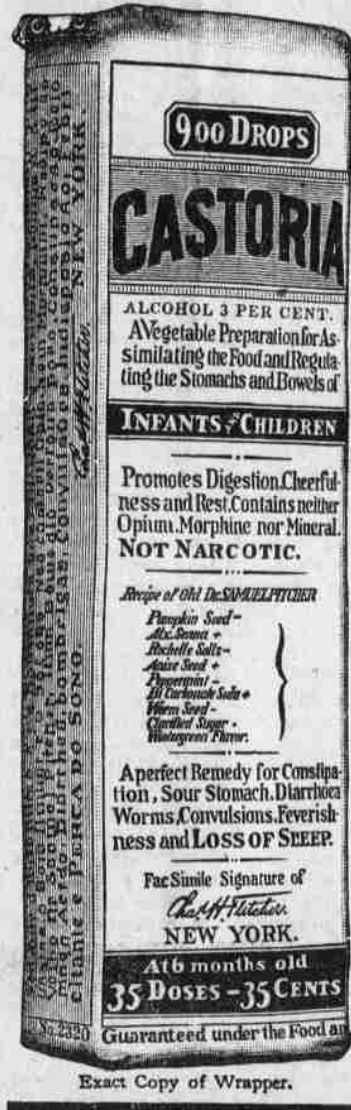
An architect, says a writer, complains that women have a mania for closets and that when a woman is allowed any liberty in the matter she changes his whole architectural plan in order to make room for them. This he says, makes him a laughing stock among his fellow architects. This is very interesting, but why do architects make plans if not to make every effort themselves to secure conveniences? A house may be architecturally perfect and yet not fit to live in, and it certainly is not if there is not closet room enough.

Starch, like everything else, is being constantly improved, the patent Starches put on the market 25 years ago are very different and inferior to those of the present day. In the latest discovery—Defiance Starch—all injurious chemicals are omitted, while the addition of another ingredient, invented by us, gives to the Starch a strength and smoothness never approached by other brands.

## Pronounce These Rapidly.

The vicar of Dwygyfychi-cum-Pennmaenaur told the royal commission of the church in Wales recently that he had been at Platyecum-Cargawch, Llangul-cum-Tregalan, Llanyfuan-cum-Llanfair and Arleechwedd.

Let thy discontents be thy secrets.—Franklin.



The Manchester canal was built at a cost of \$75,000,000 to reduce freight rates for a distance of 35 miles, and, while it did not prove a good interstate bearing investment on such a large expenditure, its indirect and more permanent benefits are said to have warranted it.

Germany has 3,000 miles of canal, carefully maintained, besides 7,000 miles of other waterway. France, with an area less than we would consider a large state, has 3,000 miles of canal; and in the northern part, where the canals are most numerous, the railways are more prosperous. England, Germany, France, Holland and Belgium are all contemplating further extension and improvement of their canal systems.—Century Magazine.

## Used Ink for Bluing.

"One can never be too careful about apparently harmless articles setting about the house," said a housewife the other day. "Not long ago my husband brought home one of those big tall bottles of ink from the office. It had got to be such a nuisance buying one of the small five-cent bottles every time we ran out of ink, that he said he would bring home a supply."

"About a week after that I got a new maid, and when she did the washing she took the big bottle of ink for bluing. Of course every stitch of our white clothes in the washing was ruined."

## A Misogynist.

"Me father," said Mrs. Murphy, "always gets up when a lady enters the room."

"The old man is too suspicious," Mr. Murphy grunted. "I never seen the woman yet that 'ud be mane enough to hit ye when ye was sittin' down."—Chicago Daily News.

## Left Army for Pork Trade.

Aladar Stollnick, an aristocratic lieutenant of a Hungarian hussar regiment, has resigned his commission to become an apprentice to a pork butcher in Budapest. He says he can not live on his pay—\$400 a year—and that he considers a man of intelligence and energy can do well in the pork trade.

Give Defiance Starch a fair trial—try it for both hot and cold starching, and if you don't think you do better work, in less time and at smaller cost, return it and your grocer will give you back your money.

It is worth while to do even the smallest kindness as we go along the way. Nothing is lost. No dewdrop perishes, but, sinking into the flower, makes it sweeter.—Richter.

## He Was Not to Blame.

Little Bartholomew's mother overheard him swearing like a mule driver, says the Cleveland Leader. He displayed a fluency that overwhelmed her. She took him to task, explaining the wickedness of profanity as well as its vulgarity. She asked him where he had learned all those dreadful words. Bartholomew announced that Cavert, one of his playmates, had taught him. Cavert's mother was straightway informed and Cavert was brought to book. He vigorously denied having instructed Bartholomew, and neither threats nor tears could make him confess. At last he burst out: "I didn't tell Bartholomew any cuss words. Why should I know how to cuss any better than he does? Hasn't his father got an automobile, too?"

## CHEAP IRRIGATED LAND.

Grand opening Sept. 5th under Carey Act. Little Snake River Valley, Routt County, Colo. \$25.00 per acre for land and water. \$5.25 per acre down. Excursion rates. Routt County Development Co., 814 17th St., Denver, Colo.

## The Reason Why.

"How did you come here?" said one Mexican bull to an old acquaintance, as they met in the arena.

"How?" replied the other, with a glance around. "I may say I was roped in."

## CASTORIA

For Infants and Children.

The Kind You Have Always Bought Bears the Signature of

of

Use

For Over

Thirty Years

CASTORIA

THE CENTAUR COMPANY, NEW YORK CITY.

Exact Copy of Wrapper.

Her Secret Sorrow.

"That woman over there has some hidden sorrow," declared the sympathetic one, as she came in and took her seat at a table not far away. "I have often noticed her. See, her companion orders everything she could possibly want, and yet she sits there silent with a face like a mask. I am awfully sorry for her."

## One to Reckon With.

There's a little girl who gave her folks a shock the other day.

"Ma, I want a bathing suit," she said.

"You shan't have any," ma replied.

"Then I'll go bathing without one."

The bathing suit matter is now being arbitrated.

## Old Bell Still Tells Curses.

In the belfry of the old parish church at Bury, England, the curfew that tolled the knell of the parting day 300 years ago is still in place, and is rung every night at sunset.

## Chance for Collectors.

An old portrait of J. Pierpont Morgan is among the unclaimed dutiable goods in the government stores at New York. It will be offered at public sale.

## Shake Into Your Shoes.

Allen's Foot-Ease. It cures painful, swollen, smarting, sweating feet. Makes new shoes easy. Sold by all Druggists and Shoe Stores. Don't accept any substitute. Sample FREE. Address A. S. Olmsted, Le Roy, N. Y.

## Man does what he can, and bears what he must, and the name by which he calls the result is left to each to decide; a clever man calls it happiness.—Goethe.

## All Buried by Government.

In some parts of Switzerland all the dead are buried by the government, without respect to wealth or position.

## FITS, St. Vitus Dance and all Nervous Diseases.

permanently cured by Dr. Kline's Great Nerve Restorer. Send for Free \$2.00 trial bottle and treatise. Dr. R. H. Kline, M.D., 931 Arch St., Philadelphia, Pa.

## Observe the face of the wife to know the husband's character.—Spanish.

You always get full value in Lewis' Single Binder straight \$5 cigar. Your dealer or Lewis' Factory, Peoria, Ill.

The virtue of a man is measured by his every-day conduct.—Pascal.

Mrs. Winslow's Soothing Syrup. For children teething, cures the pain, reduces inflammation, allays pain, cures wind colic. 25c a bottle.

The good man will avoid the spot of any sin.—Ben Jonson.

## STOP WOMAN AND CONSIDER

First, that almost every operation in our hospitals, performed upon women, becomes necessary because of neglect of such symptoms as Backache, Irregularities, Displacements, Pain in the Side, Dragging Sensations, Dizziness and Sleeplessness.

Second, that Lydia E. Pinkham's Vegetable Compound, made from native roots and herbs, has cured more cases of female ills than any other one medicine known. It regulates, strengthens, and restores women's health and is invaluable in preparing women for child-birth and during the period of Change of Life.

Third, the great volume of unsolicited and grateful testimonials on file at the Pinkham Laboratory at Lynn, Mass., many of which are from time to time being published by special permission, give absolute evidence of the value of Lydia E. Pinkham's Vegetable Compound and Mrs. Pinkham's advice.

## Lydia E. Pinkham's Vegetable Compound

For more than 30 years has been curing Female Complaints, such as Dragging Sensations, Weak Back, Failing and Displacements, Inflammation and Ulceration, and Organic Diseases, and it dissolves and expels Tumors at an early stage.

## Mrs. Pinkham's Standing Invitation to Women

Women suffering from any form of female weakness are invited to write Mrs. Pinkham, Lynn, Mass. for advice. She is the Mrs. Pinkham who has been advising sick women free of charge for more than twenty years, and before that she assisted her mother-in-law, Lydia E. Pinkham in advising. Thus she is especially well qualified to guide sick women back to health. Write today, don't wait until too late.

My dear Fanny Sunday Oct 10

Of course you know I am doing my own work. Yes and getting on fine too. The first milk I had a chicken of a time with my stomach working, and by the way must tell you, I had such a time with iron sticking declared would never attempt it again. Was telling my next door neighbor she asked if I was using Defiance Starch. I said no. So she gave me enough for the following milk. It is just lovely with this starch. I am do my ironing in one half the time. It is actually fun to use it. The way the iron slips over the clothes. Never sticks. Am finished before I know it. Sometimes wish I had a few more pieces.

You must try it. Defiance Starch comes in 16 oz packages. Home price as the other 12 oz packages. And really it's no effort to iron with it. Defiance - Lovingly your sister

## W. L. DOUGLAS

\$3.00 & \$3.50 SHOES

THE FAMOUS "E" EVERY MEMBER OF THE FAMILY AT ALL PRICES.

**\$25,000** To any one who can prove W. L. Douglas does not make & sell more Men's \$3 & \$3.50 shoes (than any other manufacturer).

THE REASON W. L. Douglas shoes are worn by more people in all walks of life than any other make, is because of their excellent style, easy-fitting, and superior wearing qualities. The selection of the leathers and other materials for each part of the shoe, and every detail of the making is looked after by the most complete organization of superintendents, foremen and shoe makers, whose workmanship cannot be excelled.

If I could take you into my large factories at Brockton, Mass., and show you how carefully W. L. Douglas shoes are made, you would then understand why they hold their shape, fit better, wear longer and are of greater value than any other make.

**My \$25,000 Edge and \$5 Gold Bond Shoes cannot be equaled at any price.**

CAUTION! No Substitutes. Ask your dealer for W. L. Douglas shoes. If he cannot supply you, send direct to factory. Shoes sent everywhere by mail. Catalog free. W. L. Douglas, Brockton, Mass.

# Onions Net \$600 an Acre

This is What They Are Raising on Land in South Texas That You Can Buy—10 to 640 Acres and Two Town Lots for \$210 Without Interest—Payable \$10 Per Month.

The Famous Simmons Ranch South of San Antonio is Now on the Market—Investigate This and Get in Before it is Too Late.

Messrs. F. L. Beatty and I. F. Isham, of Carnegie, Okla., and G. A. Severs, of Mountain View, Okla., all well known, reliable gentlemen, write: Carnegie, Okla., March 12, 1907.

Dr. C. F. Simmons, San Antonio, Texas.

Dear Sir:—We left Oklahoma on the morning of the 6th of March to visit your Atascosa County lands, for the purpose of seeing the land and investigating your proposition for ourselves, and our neighbors who are contemplating purchasing.

We spent some time on the ranch and satisfied ourselves thoroughly that the land was all that you had represented it to be. The soil is fine and the water is as good as can be. We have brought away samples of soil taken from different places, and Cotton, Alfalfa, Wheat and Corn that can be seen by calling at the office of F. L. Beatty, at Carnegie, Oklahoma. This land will produce anything that is planted upon it if properly cultivated.

We stood on top of the hill in the Musgrave pasture, and could see for miles in every direction, almost over the entire property. This land is all irrigable, and sufficient water can be obtained to irrigate the entire property.

We are entirely satisfied to recommend the proposition to our people. The only thing needed to make this a great country is a railroad, and we have your assurance that it will be built at an early date. If you can satisfy the people that this railroad will be built through this land within any reasonable time, there will be no trouble about finding purchasers for every farm and lot that you have got.

It is such an easy country to build a railroad over, and you are offering such a large bonus, and the tonnage will be so great for a railroad through that country when this property is sold, that you certainly will be able to find some one who will build the road without delay.

We will be glad to have you refer anyone who wants to know anything about this land to us.

Yours truly, F. L. BEATTY, I. F. ISHAM, G. A. SEVERNS, Mountain View, Okla.

Write today for literature telling you all about the ranch and photographic views of same.

**DR. CHAS. F. SIMMONS,**

215 Alamo Plaza, SAN ANTONIO, TEXAS.

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**WANTED LIVE FOXES AND COON AND SKUNKS**